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AUTHOR	Darling-Hammond, Linda
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ABSTRACT

This book describes results of the work by the National Board for Professional Teaching Standards. Section 1, "Introduction," introduces the work of the National Board and discusses educational change and teacher improvement in general. Section 2, "Standard Setting in Teaching," explains that in order to appreciate the effects of the National Board's work, it is important to understand where it fits in the organization and governance of the teaching profession. It discusses the accreditation of teacher preparation programs, the development of a common knowledge base, and the creation of professional standards. Section 3, "Influences of New Standards and Assessments on Teacher Learning," explains that the new standards are significantly different from first-generation approaches to teacher testing. They seek to assess teaching knowledge and skill through portfolios and performances. This section discusses the demonstration of standards and assessments at work and describes the INTASC standards, which include 10 principles. Section 4, "Uses and Effects of the New Standards," describes how states have adopted and used the new standards. Section 5, "Preparing Teachers to Meet the Standards," examines how teacher education programs participate in preparing teachers for the new standards. Section 6, "Conclusion," suggests that the new standards can make an important contribution to the education of teachers who are prepared for the challenges of the 21st century. (Contains 39 references.) (SM)

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Reshaping Teaching Policy, Preparation, and Practice

Influences of the

National Board for Professional Teaching Standards

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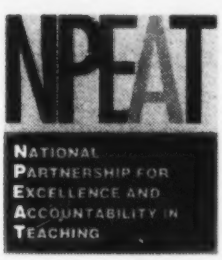

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Introduction

As the 21st century approaches, it is increasingly clear that greater investments in teacher preparation and development will be required to ensure that the teaching force is well equipped to succeed at teaching much more challenging content to a much more diverse group of learners. Such reforms, many policymakers and practitioners believe, will in turn require comprehensive restructuring of the systems by which states and school districts license, hire, induct, support, and provide for the continual learning of teachers (Carnegie Forum on Education and the Economy, 1986; Holmes Group, 1986, 1996; National Commission on Teaching and America's Future [NCTAF], 1996).

In the United States, new standards for teacher education accreditation and for teacher licensing, certification, and ongoing evaluation have become a prominent lever for promoting system-wide change in teaching (Darling-Hammond, Wise, & Klein, 1995). The National Commission on Teaching and America's Future, (1996) argued:

> Standards for teaching are the linchpin for transforming current systems of preparation, licensing, certification, and ongoing development so that they better support student learning. [Such standards] can bring clarity and focus to a set of activities that are currently poorly connected and often badly organized . . . . Clearly, if students are to achieve high standards, we can expect no less from their teachers and from other educators. Of greatest priority is reaching agreement on what teachers should know and be able to do to teach to high standards. (p. 67)

The effort to define what teachers should know and be able to do to be successful—and the use of assessments of such knowledge and skills to make decisions about entry and continuation in teaching—has gained steam with the advent of new standards for student learning promulgated by both national associations and state governments (Darling-Hammond, 1997b; O'Day & Smith, 1993). These standards posit a more active, integrated, and intellectually challenging curriculum for all students, not just the most academically able. Thus, they also anticipate more diagnostic teaching that provides multiple pathways to learning, so that a wider range of students is enabled to succeed.

Current education reforms also create a broader range of roles for teachers in developing curriculum and assessments of student performance, coaching and mentoring other teachers, and working more closely with families and community agencies. Finally, for their success, school-based management and shared decision-making initiatives rely on the capacity of education practitioners to make knowledgeable judgments about teaching, program design, and school organization. Recognizing that teachers need access to much greater knowledge in order to meet these demands, policymakers are beginning to link efforts to raise standards for students to initiatives that would also raise standards for teachers. This has spurred substantial changes in teacher preparation programs across the United States. Approaches to initial licensing, induction, and ongoing professional development are being reconsidered, and a new National Board for Professional Teaching Standards (hereafter, NBPTS or the National Board) has begun to offer advanced certification for highly accomplished teachers.

An analogue to the bodies that offer board certification in medicine, architecture, and accounting, the mission of the National Board is to "establish high and rigorous standards for what accomplished teachers should know and be able to do, and to develop and operate a national, voluntary system to assess and certify teachers who meet these standards" (NBPTS, 1989, p. 1). The 63-member National Board, established in 1987 with a majority of practicing classroom teachers, has organized its standards development around five major propositions, which are more fully elaborated in the standards for each of 30 areas, defined by subject matter discipline and developmental level. In brief, they are:

Teachers are committed to students and their learning. National Board-certified teachers are dedicated to making

knowledge accessible to all students. They treat students equitably, recognizing individual differences. They adjust their practice based on observation and knowledge of their students' interests, abilities, skills, knowledge, family circumstances, and peer relationships. They understand how students develop and learn. They are aware of the influence of context and culture on behavior. They develop students' cognitive capacity and respect for learning. Equally important, they foster students' self-esteem, motivation, character, civic responsibility and their respect for individual, cultural, religious, and racial differences.

Teachers know the subjects they teach and how to teach those subjects to students. National Board-certified teachers have a rich understanding of the subject(s) they teach and appreciate how knowledge in their subject is created, organized, linked to other disciplines and applied to real-world settings. Accomplished teachers command specialized knowledge of how to convey and reveal subject matter to students. They are aware of the preconceptions and background knowledge that students typically bring to each subject and of strategies and instructional materials that can be of assistance. Their instructional repertoire allows them to create multiple paths to knowledge, and they are adept at teaching students how to pose and solve their own problems.

Teachers are responsible for managing and monitoring student learning. National Board-certified teachers create instructional settings to capture and sustain the interest of their students and to make the most effective use of time. Accomplished teachers command a range of instructional techniques, know when each is appropriate, and can implement them as needed. They know how to motivate and engage groups of students to ensure a purposeful learning environment, and how to organize instruction to allow the schools' goals for students to be met. They understand how to motivate students to learn and how to maintain their interest even in the face of temporary failure. Board-certified teachers regularly assess the progress of individual students as well as that of the class as a whole. They employ multiple methods for measuring student growth and understanding and can clearly explain student performance to parents.

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Teachers think systematically about their practice and learn from experience. National Board-certified teachers exemplify the virtues they seek to inspire in students—curiosity, tolerance, honesty, fairness, respect for diversity and appreciation of cultural differences—and the capacities that are prerequisites for intellectual growth: the ability to reason and take multiple perspectives, to be creative and take risks, and to adopt an experimental and problem-solving orientation. Striving to strengthen their teaching, Board-certified teachers critically examine their practice, seek the advice of others, and draw on educational research and scholarship to expand their repertoire, deepen their knowledge, sharpen their judgment and adapt their teaching to new findings, ideas, and theories.

Teachers are members of learning communities. National Board-certified teachers contribute to the effectiveness of the school by working collaboratively with other professionals on instructional policy, curriculum development, and staff development. They can evaluate school progress and the allocation of school resources in light of their understanding of state and local educational objectives. They are knowledgeable about specialized school and community resources that can be engaged for their students' benefit, and are skilled at employing such resources as needed. Accomplished teachers find ways to work collaboratively and creatively with parents, engaging them productively in the work of the school. (NBPTS, n.d.)

By the fall of 1997, the Board had certified just over 900 teachers using performance-based assessments of their teaching knowledge and practice. Over the next decade as the operation develops to scale, the Board expects to certify 100 thousand more (about three percent of the U.S. teaching force). However, the Board has already had much greater impact than these initial numbers would suggest. As the first professional effort to define accomplished teaching, it has also had an enormous influence on standard setting for beginning teacher licensing, and it is currently beginning to shape the nature of many teacher education programs. Furthermore, the work of the Board has affected teacher assessment, on-the-job evaluation, and professional development for teachers throughout the United States. In the following chapter, I describe some of the results of the Board's work, evaluate its present impact, and discuss issues that its efforts raise for the future of teaching and the nature of the teaching career.

Standard Setting in Teaching

In order to appreciate the spillover effects of the National Board's work, it is important to understand where it fits in the organization and governance of the teaching profession in the United States. In the U.S., professions generally set and enforce standards in three ways: (1) through professional accreditation of preparation programs; (2) through state licensing, which grants permission to practice; and (3) through certification, which is a professional recognition of high levels of competence (Darling-Hammond, Wise, & Klein, 1995). In education, the term "certification" has often been used to describe states' decisions regarding admission to practice, commonly termed licensing in other professions. Until the creation of the National Board for Professional Teaching Standards, teaching has had no vehicle for advanced professional certification. To avoid confusion between the actions of this new professional board and those of states, I use the terms *licensing* and *certification* as commonly used by professions. The term, "licensing," is used to describe state decisions about admission to practice, and "certification" is used to describe the actions of the National Board in certifying accomplished practice.

The accreditation process is meant to ensure that all preparation programs provide a reasonably common body of knowledge and structured training experiences that are comprehensive and up-to-date. Licensing examinations are meant to ensure that candidates have acquired the knowledge they need to practice responsibly. The tests generally include both surveys of specialized information and performance components that examine aspects of applied practice. Lawyers must analyze cases and, in some states, develop briefs or memoranda of law to address specific issues; doctors must diagnose patients via case histories and describe the treatments they would

prescribe; engineers must demonstrate that they can apply certain principles to particular design situations. These examinations are developed by members of the profession through state professional standards boards.

In addition, many professions offer additional examinations that provide national recognition for advanced levels of skill, such as certification for public accountants, board certification for doctors, and registration for architects. This recognition generally takes extra years of study and practice, often in a supervised internship and/or residency, and is based on performance tests that measure greater levels of specialized knowledge and ability. Those who have met these standards are then allowed to do certain kinds of work that other practitioners cannot. The certification standards inform the other sets of standards governing accreditation, licensing, and relicensing. They are used to ensure that professional schools incorporate new knowledge into their courses and to guide professional development and evaluation throughout the career. Thus, these advanced standards may be viewed as an engine that pulls along the knowledge base of the profession. Together, standards for accreditation, licensing, and certification comprise a "three-legged stool" (NCTAF, 1996) that supports quality assurance in the mature professions.

This stool is quite wobbly in the quasi-profession of teaching, which does not require accreditation for schools of education and has not, until recently, had professionally developed standards or valid assessments for licensing or advanced certification. Whereas professions typically assume responsibility for defining, transmitting, and enforcing standards of practice, teachers, at least in the United States, historically have had little or no control over most of the mechanisms that determine professional standards. In professions like medicine, nursing, architecture, accounting, and law, professional standards boards composed of expert members of the profession establish standards for education and entry. Until recently, though, such boards have been absent in teaching. Instead, in most states, authority for determining the nature of teacher preparation, the types and content of tests used for licensure, and the regulations that govern practice has resided in governmental bodies (legislatures and school boards) and in administrative agencies (state departments of education and central offices). These authority relations have tended to produce bureaucratic rather than professional controls over teaching—that is, controls aimed at standardizing procedures rather than at building knowledge that can be applied differentially depending on the demands of a particular subject, the social context in a specific community, or the needs of a given child.

Developing a Common Knowledge Base

There have been at least two problems with the development of a common knowledge base for teaching. First, the development of useful and usable knowledge about teaching has been a long, slow process of assembling and connecting insights across many fields, including human development and learning, motivation and behavior of individuals and groups, the nature of intelligence and performance, and the effects of curricular approaches and teaching strategies. Much has been learned in all of these areas over the last 30 years through both the experimental pursuit of theoretical knowledge and the codification of the "wisdom of practice" (Shulman, 1986), that is, the understanding of teaching developed by expert practitioners.

Another problem, however, is that of knowledge diffusion. While researchers may now have greater understanding of teaching and learning than they once did, there are few reliable vehicles for transmitting this knowledge to the field. In the United States, education knowledge has been disseminated largely through research journals and monographs read by other researchers, rather than clinical journals widely read by practitioners. Although there are areas of consensus among "experts" in the field who read the same journals and attend the same conferences, these are not widely shared among practitioners.

Because education has not had common standards or well-developed, universal vehicles for accrediting professional education programs and licensing candidates, it has lacked the primary means other professions use to incorporate advances in knowledge into the training of each generation of practitioners. The way in which medicine, for example, ensures that new research knowledge actually gets used is by including it on medical licensing examinations and specialty board examinations and in accreditation guidelines to which professional schools and hospitals must respond. In education, however, teacher examinations have reflected little of what might be called a knowledge base for teaching (Darling-Hammond, Wise, & Klein, 1995; Haertel, 1991; Shulman, 1987).

Finally, in part because of the great disjuncts between knowledge production and use, there have been longstanding differences in the field about the nature of teaching knowledge and the goals of practice. These disputes, often tacit, are guided by different presumptions about how students learn and what effective teachers should know and do. On the one hand, the bureaucratic management of teaching has involved a quest for instructional tools and systems that can be prescribed for teacher use. Such a quest rests on the assumption that

students are sufficiently standardized that they will respond in routine and predictable ways to a common stimulus, and that teaching tasks are sufficiently routine that they can be proceduralized. On the other hand, a more professional conception starts from the assumption that, because students learn in different ways and at different rates, teaching must be responsive to their needs if it is to be effective. As a consequence, teachers must make decisions in nonroutine situations using a multifaceted knowledge base applied through highly developed judgment and skill.

In the bureaucratic conception of teaching work, there is little rationale for substantial teacher education or ongoing opportunities for learning. If teaching is rendered routine, teachers need only the modest training required to apply the procedures indicated by a textbook, curriculum guide, or management technique. The professional conception, however, emphasizes the appropriateness of teaching decisions to the goals and contexts of instruction and the needs of students. It envisions evaluation not as a discrete annual event staged to determine whether teachers adequately administer the expected procedures, but as a constant feature of organizational life for practitioners who inquire continually into the usefulness of their actions and revise their plans in light of these inquiries. In this view, teachers construct knowledge about their students, classrooms, and subject matter in the course of practice, just as they use knowledge that has been developed by researchers and other teachers (Darling-Hammond, 1996).

Creating Professional Standards

A great many decisions by actors outside the classroom determine what conceptions of teaching knowledge govern teachers' opportunities to learn, both before they enter teaching and throughout their careers. These decisions are reflected in the content and character of teacher education and professional development programs that either seek to educate teachers to use wide-ranging knowledge or train them to implement set routines; in the standards that govern licensing, teacher evaluation, and professional development; in the daily schedules that isolate teachers or engage them in collective learning and problem solving; and in the organizational structures that determine who will decide all of the above.

Some policymakers and educators believe that one of the most important policy strategies for improving teaching and learning is the recent development of standards by teachers themselves. In recent years, several major reports calling for the professionalization of teaching have argued that teachers must take hold of professional standard-setting if teaching is to make good on the promise of competence

that professions make to the public (Carnegie Forum, 1986; Holmes Group, 1986). Teacher education leaders have suggested that teachers and teacher educators " . . . must take greater control over their own destiny. A powerful place where this can be done is in standards setting . . . . Professionals must define high standards, set rigorous expectations, and then hold peers to these standards and expectations" (Imig, 1992).

NCTAF concluded that newly created standards for teacher education accreditation, initial licensing, and advanced certification of teachers "could become a powerful lever for change" (p. 30). The Commission report noted:

> Of greatest priority is reaching agreement on what teachers should know and be able to do in order to teach to high standards. This standard-setting task was left unaddressed for many decades, but it has recently been accomplished by the efforts of three professional bodies that have closely aligned their work to produce standards outlining a continuum of teacher development derived directly from the expectations posed by new student standards. (pp. 67-68)

These three bodies include the National Board, an independent organization established in 1987 as the first professional body to set standards for the advanced certification of veteran accomplished teachers. The Board's standards have been used, in turn, to guide the work of the Interstate New Teacher Assessment and Support Consortium (INTASC), a group of more than 30 states working together on "National Board-compatible" licensing standards and assessments for beginning teachers both before they enter teaching and during their first two years on the job. This effort, in turn, has informed the work of the National Council for Accreditation of Teacher Education (NCATE), which has recently incorporated the performance standards developed by INTASC for judging preservice teacher education programs. NCATE is now working with universities to help them design advanced masters degree programs that will be organized around the standards of the National Board. Thus, these sets of interlocking standards create a developmental continuum for teachers, from preservice teacher education through licensing and induction, through advanced study and ongoing professional development that includes, but is not limited to, advanced certification.

The standards developed by the National Board, INTASC, and NCATE are linked to one another and to the new student standards

developed by professional associations such as the National Council of Teachers of Mathematics (NCTM). These initiatives reflect knowledge about teaching and learning that supports a view of teaching as complex, contingent on students' needs and instructional goals, and reciprocal—that is, continually shaped and reshaped by students' responses to learning events. The new standards and assessments explicitly take into account the teaching challenges posed by a student body that is multicultural and multilingual, that possesses multiple intelligences, and that includes diverse approaches to learning. By incorporating new subject matter standards for students and the demands of diverse learners, as well as the expectation that teachers must collaborate with colleagues and parents in order to succeed, the standards define teaching as a collegial, professional activity that responds to considerations of subjects and students. By examining teaching in the light of learning, they put considerations of effectiveness at the center of practice. This view contrasts with that of the recent "technicist" era of teacher training and evaluation, in which teaching was seen as the implementation of set routines and formulas for behavior, unresponsive to the distinctive attributes of either clients or curriculum goals.

Another important attribute of the new standards is that they are *performance based*. That is, they describe what teachers should know, be like, and be able to do, rather than listing courses that teachers should take in order to be awarded a license. This shift toward performance-based standard setting is in line with the approach to licensing taken in other professions and with the changes already occurring in a number of states. This approach aims to clarify the criteria for a determination of competence, placing more emphasis on the abilities teachers develop than the hours they spend taking classes. Ultimately, performance-based licensing standards could enable states to permit greater innovation and diversity in how teacher education programs operate by assessing their outcomes rather than by regulating their inputs or procedures. Well-developed assessments of candidates, if they actually measured the important attributes of teaching knowledge and skill, could open up a variety of pathways and types of preparation for entering teaching without lowering standards as current emergency licensure provisions and many alternative certification programs do.

As a result of these combined initiatives, systems of licensing and certification that directly assess what teachers know and can do are gradually replacing the traditional methods of requiring graduation from an approved program or tallying specific courses as the basis for granting program approval, a license, or credit for professional growth.

Furthermore, because the three sets of standards described above are substantively connected and form a continuum of development along the career path of the teacher, they conceptualize the main dimensions along which teachers can work to improve their practice. By providing vivid descriptions of high-quality teaching in specific teaching areas, Ingvarson (1997) says, "they clarify what the profession expects its members to get better at . . . . Profession-defined standards provide the basis on which the profession can lay down its agenda and expectations for professional development and accountability" (p. 1).

Influences of New Standards and Assessments on Teacher Learning

The assessments developed by the National Board and INTASC stand in contrast to first-generation approaches to teacher testing that relied primarily on multiple-choice tests of basic skills and subject matter knowledge or generic observations of teaching performance. They seek to assess teaching knowledge and skill through portfolios and performances that include authentic, complex teaching tasks as well as systematic, content- and context-based analyses of on-the-job performance. Proponents argue that such strategies may not only improve the validity of teacher assessment but also support the development of teacher education programs organized more explicitly around the attainment of important teaching abilities.

The standards themselves are educative because they vividly portray the attributes of good teaching. This example from the standards for Early Adolescence English/Language Arts teachers provides an illustration of how the Board articulates what highly accomplished teachers need to know and be able to do in a fashion that integrates understanding of learners and learning, educational goals, teaching, pedagogy, and context. Part of the discussion of "Standard I: Knowledge of Students" states:

> Accomplished middle-grades English teachers create classrooms centered around students; in these classrooms all students take pride in their growing language facility and in their increasingly adventurous explorations of literature and other texts . . . . While they believe all students can learn, accomplished teachers are keenly aware that not all students learn in the same way . . . . Because language acquisition builds on prior achievements and experiences, accomplished

> English language arts teachers make it a point to find out early in the school year who their students are as individual learners—and use this knowledge to help shape decisions in the classroom.
>
> Practically everything about the young adolescent learner is grist for the middle-grades English teacher's mill, including an awareness and appreciation of the student's cultural, linguistic and ethnic heritage, family setting, prior learning experiences, personal interests, needs and goals. In particular, knowing their students entails gaining a sense of each student's capacity to read, write, speak and listen in English and/or other languages . . . . The accomplished middle-grades English teacher complements his or her knowledge of individual students with a broad perspective on patterns of adolescent development and language acquisition. Such teachers know that children mature according to their own internal biological clocks and that a wide variation in students' developmental stages and life experiences within the same classroom is to be expected and accommodated. (NBPTS, 1993)

These discussions are further elaborated with vignettes that provide vivid descriptions of teachers enacting the standards. The vignettes illustrate how teachers draw upon many kinds of knowledge—knowledge of content, of teaching strategies, of curriculum, and of their students—when they are making decisions. Such vignettes, along with actual samples of teachers' reflections, analyses, and performances on the examinations, are used as benchmarks in the scoring process and as feedback to candidates when they receive their scores. The standards and vignettes resemble richly described cases that incorporate context and illuminate the teacher's capacity to transform knowledge into decisions in distinctive situations. As Shulman (1992) has argued, cases are particularly suited to teaching and teacher education, because both are instances of transformation:

> [T]eaching is a form of transformation in which teachers create representations of complex ideas that connect with the constructions of their students. Case methods are a particular strategy of pedagogical transformation—a strategy for transforming more propositional forms of knowledge into narratives that motivate and educate. If, however, the knowledge base and reasoning processes of teaching (or law,

> medicine, or other practical domain) are themselves case-based, then the use of case methods does not require a very elaborate transformation . . . . The field is itself a body of cases linked loosely by working principles, and case methods are the most valid way of representing that structure in teaching. (p. 17)

Demonstration of Standards and Assessments at Work

The standards provide the working principles that reflect the knowledge base and reasoning processes used by accomplished teachers. The Board's assessments—a portfolio completed over several months of teaching and performance tasks completed in an assessment center—provide a means for teachers to demonstrate not only what they do but how they reason their way to each decision. Evidence of teaching includes videotapes, plans, assignments, and samples of student work, accompanied by discussions of goals, intentions, and analyses of student learning. Teachers evaluate textbooks and materials, analyze teaching events, assess student learning and needs, and defend teaching decisions based on their knowledge of learning, curriculum, students, and pedagogy.

Howey (n.d.) describes how the principled guidance of the standards, applied in the context of daily practice, can inform the work of teacher educators and reduce the great divide between theory and practice:

> In education generally, and in teacher education specifically, there has been great reluctance to relate practice to research and theory. Cloaked in the popular but silly notion that teaching and learning are too situated and complex for generalization, too many "teacher educators" deify a quaint and romantic view of craft knowledge and model it badly. Increasingly, support for teachers' decisions and actions should be derived both from such sources as ethical standards, personal inquiry, and guiding principles and propositions derived from theory and research . . . . One's beliefs about teaching and learning and corresponding instructional decisions need to be publicly shared and defended. The NBPTS is a major catalyst toward this as a reality. (p. 7)

The Board's approach supports inquiry into the effects of one's actions as a teacher on students and their learning. First, it takes a long view of the course of instruction, documenting how teaching and

learning evolve over a number of weeks and attending to how the events occurring at a given moment in time relate to what has gone on in the weeks previous and to the particular needs of students in the class. Second, it provides a variety of ways to examine teaching in the context of students and subjects, and to examine whether teachers can recognize and address important contextual considerations. These strategies for tying commentary to specific, contextualized teaching events provide examiners with information regarding the rationale for curricular and pedagogical decisions. Third, the portfolio, through the samples of individual student work over time, enables an examination of how student learning is influenced by teaching, how teachers' analyses of student work and progress influence teaching decisions and practices, and how these in turn support, or fail to support, student progress. Because teachers are asked to select the students with diverse approaches to learning and to display their work over time in relation to teaching actions, the teacher's ability to recognize and support different learning styles and needs is also tapped.

Teachers report that the process of analyzing their own and their students' work in light of standards enhances their abilities to assess student learning and to evaluate the effects of their own actions (Athanases, 1994). Evidence suggests that the assessments may not only expand what is *measured* about teaching but also what is *learned*. In an early pilot of portfolios in the Stanford Teacher Assessment Project, which led to the National Board's work, 89 percent of teachers who participated felt that the portfolio process had had some effect on their teaching (Athanases, 1994). Teachers reported that they improved their practice as they pushed themselves to meet specific standards that had previously had little place in their teaching. Most frequently mentioned were teachers' approaches to the assessment of their students. As the portfolio continually demanded evidence of how teachers planned and adapted their instruction based on individual as well as collective student needs, teachers expanded the variety of informal as well as formal assessments they used to keep track of learning, paying more attention to how individual students were doing. Teachers also found themselves adjusting their instruction more frequently in response to these assessments. The analytic process teachers undertook often expanded their overall understanding of student learning in ways that had more far-reaching implications for their teaching. For example, one teacher described how she began to better understand students' writing development in ways that strengthened her ability to support them:

> Putting together a portfolio forced me to spend a great deal of time looking over student work (student portfolios). I was able to develop an understanding of patterns in the growth of third graders in written response to literature. This knowledge has been valuable to me this year as my students work in their literature response journals. The Assessment of Students entry had given me the opportunity to look at the responses to literature of five diverse students. This year when I began literature response journals I was more quickly aware of where the students were and how I could help them to develop their responses and thereby increase their understanding of and appreciation of literature. (Athanases, 1994, p. 431)

Teachers noted that they continue to use practices they had developed to meet the portfolio requirements; that they now better understand how various aspects of children's development and learning interact; that they are able to integrate skills more effectively in their planning; that they are now more aware of their actions and think harder about the rationales for all of their decisions; that they are more deliberate and self-confident in approaching their teaching decisions; and that they have gained colleagues with whom to brainstorm and solve problems.

In another study of teachers' perceptions of their teaching abilities before and after completing portfolios for the National Board (Tracz, Sienty, & Mata, 1994; Tracz et al., 1995), teachers reported statistically significant increases in their performance in each area assessed: planning, designing, and delivering instruction; managing the classroom; diagnosing and evaluating student learning; using subject matter knowledge; and participating in a learning community. They often commented that videotaping their own teaching and analyzing student work made them more aware of how to organize teaching and learning tasks, how to analyze whether and how students are learning, and how to intervene and change course when necessary. Teachers repeatedly say that they have learned more about teaching from their participation in the assessments than they have learned from other previous professional development experiences (see also, Haynes, 1995).

The account offered by Virginia high school English teacher Rick Wormeli, who credits the National Board certification process with changing his teaching, is typical (Bradley, 1994). During the course of the assessment, his close scrutiny of his work in light of the standards

caused him to integrate other subjects into his lessons, reorganize reading discussion groups, and discard the vocabulary book that taught words out of context in favor of using words from the students' work. Even after finishing the assessment, he continued to experiment with the changes he had begun. "I can't turn it off," he noted. New Jersey teacher Shirley Bzdewka agreed. In addition to creating a group of colleagues with whom she continues to share ideas and solve problems, she states that she believes the assessment process deepened her approach to teaching:

> I know I was a good teacher. But . . . I am a much more deliberate teacher now. I can never, ever do anything again with my kids and not ask myself, 'Why? Why am I doing this? What are the effects on my kids? What are the benefits to my kids?' It's not that I didn't care about those things before, but it's on such a conscious level now. (Bradley, 1994)

INTASC Standards

These same effects on practice are reported by beginning teachers who have experienced the Board-compatible assessments created by the INTASC consortium (Pecheone & Stansbury, 1996; Bliss & Mazur, 1997). The INTASC standards articulate what entering teachers should know, be like, and be able to do in order to practice responsibly, and to develop the kinds of deeper expertise that will eventually enable highly accomplished practice. The introduction to these model standards (INTASC, 1992) states:

> The National Board and INTASC are united in their view that the complex art of teaching requires performance-based standards and assessment strategies that are capable of capturing teachers' reasoned judgments and that evaluate what they can actually do in authentic teaching situations. (p. 1)

The INTASC task force developed its standards by building upon the work of the National Board, the student standards committees, new licensing standards in a number of states, and efforts of performance-oriented teacher education programs. The resulting standards are articulated in the form of 10 principles, each of which is further elaborated in terms of the knowledge, dispositions, and performances it implies. These, in turn, are the basis for subject-specific standards. In summary form, the 10 principles are:

Principle 1: The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.

Principle 2: The teacher understands how children learn and develop and can provide learning opportunities that support their intellectual, social, and personal development.

Principle 3: The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.

Principle 4: The teacher understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills.

Principle 5: The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.

Principle 6: The teacher uses knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.

Principle 7: The teacher plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.

Principle 8: The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual and social development of the learner.

Principle 9: The teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.

Principle 10: The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being. (INTASC, 1992)

As is true of the National Board standards, the INTASC standards explicitly acknowledge that teachers' actions or performances depend on many kinds of knowledge and on dispositions to use that knowl-

edge and to work with others to support the learning and success of all students. The more detailed description of knowledge, dispositions, and performances that represent these principles provides a basis for evaluating evidence about the achievement of the standard, thus providing guidance for both preparation and assessment.

The INTASC standards have become the basis for a staged set of examinations that evaluate subject-matter knowledge and knowledge about teaching and learning in paper and pencil tests at the end of preservice education. Then, applied teaching skills are assessed when the candidate is practicing under supervision during an internship or induction year through a portfolio assessment much like that of the National Board. More than 15 INTASC states have banded together to construct a new Test of Teaching Knowledge to be offered as the basis for an initial teaching license prior to practice. The prototypes for this test include constructed response items in response to scenarios of teaching, samples of student work, and videotapes of classroom events that seek to evaluate whether prospective teachers understand the fundamentals of child development, motivation and behavior, learning theory, the identification of common learning difficulties, principles of classroom management, and strategies for student assessment.

Many states are also creating internship or induction programs during the first year or two of teaching in which additional assessments of performance can be embedded. Since 1995, 10 states have been working to develop and pilot portfolio assessments that new teachers can undertake during a mentored first year of practice, which will then be scored by state-trained assessors as the basis for determining whether a continuing professional license will be issued. Like the National Board portfolio, the INTASC portfolio emphasizes content pedagogy along with the capacity to attend to student needs.

The portfolio assessments examine how teachers plan and guide instruction around new standards for student learning, evaluate student learning and adapt teaching accordingly, use a variety of curriculum materials, and handle problems of practice. For example, in mathematics, one assessment task requires teachers to plan an instructional unit structured around the NCTM standards of mathematical problem solving, reasoning, communication, and connections; show how they use curriculum tools including manipulatives and technology; and reflect on and revise the instruction in practice. Other tasks require teachers to analyze student work and assess learning for purposes of planning, diagnosis, feedback, and grading.

Zeichner (1993) notes that, while focusing on outcomes, the INTASC and National Board standards differ in important ways from earlier attempts to institute competency-based teacher education

(CBTE) in the 1970s. While the earlier efforts sought to break teacher behaviors into tiny discrete skill bits, articulating literally hundreds of desired competencies to be individually assessed, these recent efforts are defined at a broader level, communicating a vision about what teachers should know and be able to do, and resting on expert judgments to evaluate the ways in which they demonstrate their capacity to do it. Ingvarson (1997) notes as well that these kinds of standards "go far deeper into the nature of what it means to teach well than the lists of criteria and competencies typical of most managerial models for teacher appraisal and evaluation".

The view of teaching articulated in the new performance-based standards demands, as the INTASC report suggests, "that teachers integrate their knowledge of subjects, students, the community and curriculum to create a bridge between learning goals and learner's lives" (p. 8). Thus, rather than fragmenting and trivializing teacher knowledge and performances by specifying minute behaviors to be exhibited on demand, these efforts use research about practice to define the *kinds* of knowledge and understandings teachers should be able to use in an integrated fashion based on their analysis of their goals and students.

Tony Romano, a seventh-grade math teacher in Stamford, Connecticut, who was part of the pilot group for the new INTASC-based portfolios, found this assessment process much more helpful to the development of his teaching than the generic classroom observations that were part of Connecticut's earlier induction program. Romano recalls that, after he recorded each lesson every day for six weeks, "I would have to reflect on what I had done and how I would change the lesson to make it better, and [answer] basic questions like: How did I meet the needs of every student?" (T. Romano, personal communication). This process posed a very different set of questions for him than a process that asked him to demonstrate specific behaviors, which focused his attention on his own performance rather than the learning of the students:

> Although I was the reflective type anyway, it made me go a step further. I would have to say, okay, this is how I'm going to do it differently. I think it made more of an impact on my teaching and was more beneficial to me than just one lesson in which you state what you're going to do . . . . The process makes you think about your teaching and reflect on your teaching. And I think that's necessary to become an effective teacher. (T. Romano, personal communication)

Uses and Effects of the New Standards

In a short time, the new teaching standards have achieved a noteworthy consensus among policymakers and members of the profession. By 1997, 33 states belonged to INTASC and at least 24 of those 33 had formally adopted or adapted the INTASC standards for beginning teacher licensing. More than 20 states were involved in developing or piloting INTASC assessments for either the preservice Test of Teaching Knowledge or the portfolio for beginning teachers. Twenty-six states and more than 70 school districts had established incentives for teachers to pursue National Board certification, including fee supports, professional development offerings, and stipends or advancement opportunities for those achieving certification. Seventeen states had agreed to accept National Board certification as the basis for granting a license to out-of-state entrants or as the basis for granting "recertification" to experienced teachers. Eight had agreed to offer higher salaries to teachers successful in achieving certification. School districts like Cincinnati, Ohio, and Rochester, New York, had incorporated the National Board standards into teacher evaluation criteria, using them as one basis for recognition as a "lead teacher" who mentors others and as a basis for salary increments in a performance-based compensation schedule.

In addition, 41 states had established partnerships with the National Council for the Accreditation of Teacher Education by 1997—more than double the number engaged in such partnerships three years earlier. These partnerships encourage the use of national professional standards in the construction of teacher education programs. And, 14 states had established fully independent or quasi-independent professional standards boards for teaching, like those that exist in other professions, to set standards for licensing and preparation. New boards

such as those in Indiana, Georgia, and Kentucky have adopted the continuum of teaching standards represented by NCATE, INTASC, and the National Board as a foundation for redesigning the preparation, licensing, induction, and ongoing professional development of teachers.

These actions, collectively, lay the groundwork for what Ingvarson (1997) calls a standards-guided model of professional development, which would include:

> Profession-defined *teaching standards* that provide direction and milestones for professional development over the long term of a career in teaching;
>
> An *infrastructure for professional learning* whose primary purpose is to enable teachers to gain the knowledge and skill embodied in the teaching standards;
>
> Staged career structures and pay systems that provide *incentives and recognition* for attaining these teaching standards; and
>
> A credible system of *professional certification* based on valid assessments of whether teachers have attained the levels of performance defined by the standards.

Although some of these components have begun to be put in place, the real impact of standards has yet to occur. This impact will include widespread use for professional development, as well as for making decisions about which institutions are allowed to prepare teachers, which individuals are allowed to enter teaching, and how advancement in the field will be acknowledged.

Thus far, only Connecticut's system of INTASC-based performance assessments is nearly fully functioning, although several other states are moving ahead rapidly with pilots. As of October 1998, just 2,000 teachers had been certified by the National Board, although six percent of public school teachers (about 160 thousand) had participated in professional development to prepare for certification (Darling-Hammond, 1997a, p. 35). Federal funds were appropriated late in 1997 to support candidate fees for the Board, with an intention to underwrite the costs of 100,000 candidacies for Board-certification by the year 2005. The Board's plans for scale-up anticipate more than 100,000 Board-certified teachers within the next decade.

There are reasons to believe that the new standards, as they are being implemented, could exert greater leverage on practice than program approval and licensing systems have in the past. For one thing,

the standards offer a conception of teaching that is linked to student learning, and they use performance-based modes of assessment. These two features together engage teachers in activities that help them evaluate their effects on students and actively refine their practice, a much different outcome than that associated with the completion of multiple-choice tests. The standards envision licensing, certification, and accreditation systems that are structured to develop more thoughtful teaching rather than merely to select candidates into or out of teaching. They do this by engaging teachers in the individual and collective analysis of teaching and its effects, and in professional decision making. They offer new roles for teachers that involve them more deeply in the processes of assessment. For example, in addition to being assessed themselves, teachers:

- sit on boards and committees in charge of developing and reviewing the standards and assessments;
- participate in the writing, piloting, and refinement of assessment tasks;
- analyze the practice of exemplary teachers to develop standards, tasks, benchmarks, and professional development materials aimed at helping other teachers meet the standards;
- serve as assessors for the assessments; and
- act as mentors for teachers who are developing their portfolios. (Delandshire, 1996; Darling-Hammond, Wise, & Klein, 1995)

Because these activities center around authentic tasks of teaching which are examined from the perspective of standards within the contexts of subject matter and students, they create a setting in which serious discourse about teaching can occur. Because evidence of the effects of teaching on student learning is at the core of the exercises, candidates and assessors are continually examining the nexus between teachers' actions and students' responses. Focusing on the outcomes of practice while making teaching public in this way creates the basis for developing shared norms of practice (Shulman, 1992).

Connecticut's process of implementing INTASC-based portfolios for beginning teacher licensing illuminates how this can occur. Connecticut's licensing system is designed as much as a professional development system as a measurement activity, and educators are involved in every aspect of its development and implementation, so that these opportunities are widespread. Each assessment is devel-

oped with the assistance of a teacher-in-residence in the state department of education. Advisory committees of teachers, teacher educators, and administrators guide the development of standards and assessments. Hundreds of educators have been convened to provide feedback on drafts of the standards, and many more have been involved in the assessments themselves—as cooperating teachers and school-based mentors who work with beginning teachers on developing their practice; as assessors who are trained to score the portfolios; and as expert teachers who convene regional support seminars to help candidates learn about the standards and the portfolio development process. Individuals involved in each of these roles are engaged in preparation that is organized around the examination of cases and the development of evidence connected to the standards.

System developers Pecheone and Stansbury (1996) explain how the standards are used in professional development settings for beginning and veteran teachers:

> The state support and assessment system must be centered around standards that apply across contexts and that embrace a variety of teaching practices. Teaching is highly contextual, however, varying with the strengths and needs of students, strengths of the teacher, and the availability of resources. The support program needs to help beginning teachers see how to apply general principles in their particular teaching contexts. The design currently being implemented in the Connecticut secondary projects begins support sessions by modeling selected principles, then having teachers discuss work they have brought (e.g., a student assignment, a videotape illustrating discourse, student work samples) in light of the principles presented.
>
> For experienced teachers who will become the assessors and support providers, the reverse is true. They typically understand contextual teaching practices well. Although they are acquainted with the general principles at some level because they keep abreast of developments in their teaching specialty, they do not generally have extensive experience in either articulating the principles to others or in seeing their application across multiple contexts. An intensive training program for both assessors and mentors ensures similar understandings among individuals and gives them opportunities to articulate how these principles are applied in classrooms. (pp. 172-173)

These processes can have far-reaching effects. By one estimate, more than 40 percent of Connecticut's teachers have been prepared and have served as assessors, mentors, or cooperating teachers under either the earlier beginning teacher performance assessment or the new portfolios. By the year 2010, Pecheone and Stansbury (1996) state that 80 percent of elementary teachers, and nearly as many secondary teachers, will have participated in the new assessment system as candidates, support providers, or assessors (p. 174).

Creating licensing and certification systems that are deliberately constructed so as to support actively the development of teaching knowledge, skills, and dispositions is a new undertaking. This effort places greater attention both on the validity of the assessments—that is, the extent to which they represent authentic and important tasks of teaching—and on the relationship between assessment and teacher learning. For the most part, previous testing programs were designed primarily to screen out candidates rather than to encourage better training or induce good practice. In these new systems, decisions about what is tested and how are made on the basis of whether test content and methods encourage useful teacher learning and teaching practice as well as on the ability of tasks to rank or sort candidates. This concern for consequential and systemic validity has implications for the nature of the assessments developed and for the ways in which they are used.

Delandshire (1996), for example, argues that to be valuable for teacher learning, assessments must be dynamic and principled rather than static and prescribed; that is, they must allow for the construction of knowledge and for diverse practices that are the result of principled action in different contexts, rather than presuming one set of unvarying behaviors. Further, she suggests that "[i]n order for an assessment to have a continuous effect on teaching and learning, teachers must play an important role in defining and discussing their own knowledge during the assessment process" (p. 110).

Affirming the notion that explicit work on knowledge construction is an important benefit of powerful assessments, Lyons (1996) states that teacher education students at the University of Southern Maine, who complete a portfolio based on the INTASC standards during their internship year, have found the experience transforms their approach to learning as well as teaching:

> The process prompts the interns to take a new kind of responsibility for learning to teach, what is called "authoring"

> their learning. No longer do interns simply present a list of courses or grades for credentialing. They now must construct and present evidence of their mastery of learning to teach—their readiness to take responsibility for a class of learners. (p. 66)

The process of defining and discussing knowledge as it applies to an instance of teaching also occurs when standards are used in the study of cases, a strategy increasingly used by preservice teacher educators and teacher networks or study groups to help teachers think about and develop their practice. Cases and narratives about teaching illuminate the concerns and dilemmas of teaching. Yet, to be educative, they need to be linked to broad principles of knowledge (Bliss & Mazur, 1997). Standards can provide the structure for making meaning of cases, while cases can provide the vitality that makes standards come alive. Together they can nurture the reflective dialogue, collective focus on student learning, de-privatization of practice, and shared norms and values that characterize professional communities (Ingvarson, 1997).

Bliss and Mazur (1997) found that using the INTASC standards as a basis for analyzing cases allowed preservice teachers to gradually integrate standards, theory, and actual classroom practice. With repeated opportunities to reflect on cases in this way, they moved from simple awareness of standards or critiques of teaching actions to an appreciation of principled decision making and an ability to plan approaches to, or changes in, their own teaching. Other researchers who have used curriculum standards in mathematics and science as a basis for case-based professional development have found that the stimulating professional dialogue actually contributes to professional knowledge building as well as to collaborative curriculum reform (Barnett & Ramirez, 1996; Ingvarson & Marett, 1997; Schifter & Fosnot, 1993). Assessment systems like those of the National Board and INTASC support this kind of knowledge building, as they allow teachers to construct and discuss their understandings while they continually reflect on, critique, and defend their practice.

Preparing Teachers to Meet the Standards

A critical concern regarding standards is that they represent meaningful goals for candidates and colleges that allow them to prepare. The goal in standard setting should not be to increase the failure rates of candidates but to improve the caliber of their preparation for the real tasks of teaching. One of the most important aspects of the new standards for teaching is that, like those of other professions, they bring clarity to the pursuit of teaching skills by focusing on performance of critical teaching tasks rather than listing courses to be taken or testing arcane knowledge in forms far distant from actual use. The fact that candidates consistently report that they learn from the new standards and that the assessments actually help them develop and refine their skills suggests that these efforts may advance the overall capacity of the profession to do its work, rather than merely rationing slots in a more constrained labor market.

While there is reason to be enthusiastic about how the new assessments promote reflection that is satisfying to teachers, serious questions remain about how to prepare teachers for the more sophisticated practice the new standards represent. At present, there is very limited knowledge of what learning opportunities—in preservice settings, induction contexts, later professional development activites, and schoo!-based work—are associated with success in meeting the new teaching standards. As Wilson and Ball (1996) note:

> New teacher assessments are for teacher educators what the new student assessments are for teachers. They represent the standards toward which teacher educators must aim .... Reformers hope that changing the process by which

> new teachers are licensed will in turn effect changes in how they are prepared. Less well understood, however, are the challenges this presents for teacher educators, who must devise ways of preparing beginning teachers to succeed on these performance-based assessments. (p. 122)

This challenge is made greater by the fact that reforms of schooling expand the gap "between where prospective teachers start and where they are to end up" (p. 124). That is, what beginners know from their own schooling experience is even more likely than in the past to be dissimilar from reform visions of education, and hence to require greater learning and unlearning on their part. In addition, the kind of teaching for critical thinking and deep understanding envisioned by the new standards is more difficult to develop because it is more indeterminate and less susceptible to prescription. When children actually think, there is no way to predict precisely what they will uncover and what paths they will pursue.

Knowledge is just beginning to accrue regarding effective strategies for preparing beginning teachers for the kind of practice that takes account of student thinking in the pursuit of challenging subject-matter goals. There is much to learn about the efficacy and trade-offs of various tactics for building thoughtful, multi-dimensional practice. Wilson and Ball (1996) suggest that these tactics may include the creation and use of new images of practice through school-based work with teachers who engage in such practice; through curriculum materials like written cases, videotapes of practice, and computerized databases of linked artifacts of teaching that allow inquiries into lessons, units, teacher thinking, and student work; and through modeling the pedagogy anticipated by new standards in the teacher education program itself.

The value of these strategies is that they capture the interactive nature of teaching, the fact that "teaching is what teachers do, say, and think *with students, concerning knowledge*, in a particular social organization of instruction" (Cohen & Ball, in press). Teaching cannot be well understood without taking all of these interactions into account, simultaneously, in practice. Thus, professional development tools are particularly powerful when they allow for the study of teaching in light of these factors, not in the abstract or piece by piece.

A number of colleges of education have found that the new teaching standards and assessments support the development of such tools (see, for example, Harris, Terrell, and Russell, 1997; Lyons, 1996). Col-

leges have found that, in order to demonstrate the knowledge and skills outlined by INTASC and the National Board, candidates need many more opportunities to learn about practice *through* practice, including structured exhibitions and performances, and extended clinical experiences integrated with coursework. This description of changes at the University of Arkansas at Monticello, sparked by the new Arkansas Teacher Licensure principles, which were based on the INTASC standards, and by the new standards of NCATE, which are now the basis for all program approval in the state is representative of many colleges as stated in Harris, Terrell, & Russell (1997):

> Specific reforms in teacher education at UAM included the development of a (year-long) internship, a completely restructured curriculum, and a performance-based assessment system involving observations, portfolios, simulations, interviews, and exams . . . . Certain schools in eight school districts that have joined in a special partnership relationship with the university, designated Professional Development Schools, host the senior year interns . . . . Traditional and separately identified courses (i.e., American Education, Introduction to Special Education, etc.) have been replaced by integrated content courses . . . . Education professors work in teams to continually revise the curriculum, facilitate delivery of content, and provide student assessment beyond written exams. (pp. 16-17)

Similarly, at the University of North Dakota, the creation of new portfolio assessments of teaching in response to NCATE's expectations for entry and exit performance standards led not only to exciting new assessments for prospective teachers, guided by standards that reflect and go beyond the INTASC work, but also to the development of portfolios for young children in the elementary school with which the university works most closely in a professional development school relationship. In a context that has nurtured authentic assessment for children and teachers for many years, the North Dakota initative illustrates how six years of work with standards-based assessment in a school/university partnership can contribute to the simultaneous renewal of schools and teacher education programs (Harris & Gates, 1997). Teachers have found that this work has enhanced both their knowledge of children and their understanding of their own teaching.

In a similar fashion, work with the National Board standards and assessments shapes a simultaneous renewal process for schools and the college of education at George Washington University. As dean Mary Futrell (1996) notes:

> The commitment to portfolios, assessment, reflection, and active learning are core values in our emerging curriculum. Perhaps the use of these principles and strategies is nowhere reflected more than in the work the school is doing to support teachers in our area who are voluntarily seeking to become nationally certified by participating in the National Board for Professional Teaching Standards assessment and certification process. We have formed partnerships with nine school districts to support teachers, and we are using our experiences with the NBPTS certification process to help define how to prepare teachers to be more reflective in their teaching and to work in restructured school environments. (p. 46)

These wide-ranging initiatives and the models increasingly used for authentic assessment of teaching have all been informed, directly or indirectly, by the Board's efforts to define and document accomplished teaching. The spillover effects do not stop at the boundaries of education schools but find their way into the classrooms of young children as well. New efforts by NCATE and the National Board to work with schools of education to use the Board's standards as the basis for constructing advanced master's degree programs designed to help teachers work toward accomplished teaching, promise to produce an even wider range of possibilities.

While evidence of the power of these tools for engendering more thoughtful practice is hopeful, we still do not know what combinations of teacher development opportunities and school conditions are most likely to result in high-quality teaching of the sort anticipated by the standards and, in turn, in high levels of student learning. Nor do we know which combinations of conditions will be cost effective or whether these vary based on the context, stage of teaching career, etc. These questions must be studied within the framework of teacher development efforts that seek to create such learning opportunities and then to evaluate their effects. Finally, while there is substantial testimony that teachers learn a great deal by participating in these assessments, we do not know exactly what kind of learning takes place,

under what circumstances, and how it can be harnessed to the cause of sustained professional development and widespread improvements in teaching. The continued expansion of these efforts will rely on such research as well as on further policy development.

Conclusion

Recently developed professional standards for teaching hold promise for mobilizing reforms of the teaching career and helping to structure learning opportunities that reflect the complex, reciprocal nature of teaching work. Their potential value lies partly in their authenticity—their ability to capture the important interactions between teachers and students, content and contexts that influence learning. In addition, the participatory nature of the accompanying assessment systems supports wide development of knowledge throughout the profession, enhancing the establishment of shared norms by making teaching public and collegial. Finally, the connection of a continuum of teaching standards to one another and to new student standards could bring some focus and coherence to a fragmented, chaotic system that currently leaves teacher learning largely to chance.

Teaching standards are not a magic bullet. By themselves, they cannot solve the problems of dysfunctional school organizations, outmoded curricula, inequitable allocations of resources, or lack of social supports for children and youth. Standards, like all other reforms, hold their own dangers. Standard setting in all professions must be vigilant against the possibilities that practice could become constrained by the codification of knowledge that does not sufficiently acknowledge legitimate diversity of approaches or advances in the field; that access to practice could become overly restricted on grounds not directly related to competence; or that adequate learning opportunities for candidates to meet the standards may not emerge on an equitable basis. Although there are many dilemmas to be resolved and barriers to be overcome, the efforts thus far of educators and policymakers to confront and address these concerns provide much hope that new stan-

dards for teaching can make an important contribution to the education of educators who are prepared for the challenges of the 21st century.

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About the Author

Linda Darling-Hammond is currently Charles E. Ducommun Professor of Teaching and Teacher Education at Stanford University. Her research, teaching, and policy work focus on issues of school restructuring, teacher education, and educational equity. She is also executive director of the National Commission on Teaching and America's Future (NCTAF), a blue-ribbon panel whose 1996 report, *What Matters Most: Teaching for America's Future*, has been widely acclaimed as a major blueprint for transforming education so that all children are guaranteed access to high-quality teaching.The Commission's work has already led to sweeping policy changes affecting teaching and schooling at all levels of government and to ongoing reforms in the preparation of teachers.

Dr. Darling-Hammond has written and edited seven books, including *The Right to Learn: A Blueprint for Creating Schools that Work*, which was awarded the Outstanding Book Award from the American Educational Research Association in 1998, and more than 200 journal articles, book chapters, and monographs on issues of policy and practice. Among her other recent books are *Professional Development Schools: Schools for Developing a Profession*, *A License to Teach: Building a Profession for 21st Century Schools*, and *Authentic Assessment in Action*.

Prior to her appointment at Stanford, Darling-Hammond was William F. Russell Professor in the Foundations of Education at Teachers College, Columbia University, where she was also co-director of the National Center for Restructuring Education, Schools, and Teaching (NCREST). She is past president of the American Educational Research Association, a two-term member of the National Board for Professional Teaching Standards, and a member of the National Academy of Education.

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She has been deeply engaged in efforts to redesign schools so that they focus more effectively on learning and to develop standards for teaching. As chair of New York State's Council on Curriculum and Assessment, she helped to fashion a comprehensive school reform plan for the state that supports curriculum and assessment for more challenging learning goals linked to professional development for teachers and greater equity for students. As chair of the Model Standards Committee of the Interstate New Teacher Assessment and Support Consortium (INTASC), she has helped to develop licensing standards for beginning teachers that reflect current knowledge about what teachers need to know to teach diverse learners to these higher standards.

Dr. Darling-Hammond began her career as a public school teacher and was co-founder of a preschool and day care center. She also served as senior social scientist and director of the RAND Corporation's Education and Human Resources Program and as director of the National Urban Coalition's Excellence in Education Program.

Dr. Darling-Hammond received her B.A. magna cum laude from Yale University in 1973, and her doctorate in urban education, with highest distinction, from Temple University in 1978. She received the Phi Delta Kappa George E. Walk Award for the most outstanding dissertation in the field of education in 1978, the American Educational Research Association's Research Review Award in 1985, the American Federation of Teachers' Quest Award for Outstanding Scholarship in 1987, the Association of Teacher Educators' Leadership in Teacher Education Award in 1990, Educational Equity Concepts' Woman of Valor Award in 1995, the Association of Teacher Educators' Distinguished Educator Award in 1997, the American Association of Colleges for Teacher Education's David G. Imig Award for Distinguished Achievement in Teacher Education in 1997, and the Council for Chief State School Officers' Distinguished Leadership Award in 1998.

1307 New York Avenue, NW
Suite 300
Washington, DC 20005-4701
Tel: 202/293-2450
Fax: 202/457-8095